



## The cost of emergency hospital admissions for falls on snow and ice in England during winter 2009/10: A cross sectional analysis

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### Abstract:

**BACKGROUND:** In the UK, the 2009/10 winter was characterised by sustained low temperatures; grit stocks became depleted and surfaces left untreated. We describe the relationship between temperature and emergency hospital admissions for falls on snow and ice in England, identify the age and gender of those most likely to be admitted, and estimate the inpatient costs of these admissions during the 2009/10 winter. **METHODS:** Hospital Episode Statistics were used to identify episodes of emergency admissions for falls on snow and ice during winters 2005/06 to 2009/10; these were plotted against mean winter temperature. By region, the logs of the rates of weekly emergency admissions for falls on snow and ice were plotted against the mean weekly temperature for winters 2005/06 to 2009/10 and a linear regression analysis undertaken. For the 2009/10 winter the number of emergency hospital admissions for falls on snow and ice were plotted by age and gender. The inpatient costs of admissions in the 2009/10 winter for falls on snow and ice were calculated using Healthcare Resource Group costs and Admitted Patient Care 2009/10 National Tariff Information. **RESULTS:** The number of emergency hospital admissions due to falls on snow and ice varied considerably across years; the number was 18 times greater in 2009/10 (N Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 16,064) than in 2007/08 (N Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 890). There is an exponential increase [ $\ln(\text{rate of admissions})$  Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin)  $0.456 - 0.463 \times (\text{mean weekly temperature})$ ] in the rate of emergency hospital admissions for falls on snow and ice as temperature falls. The rate of admissions in 2009/10 was highest among the elderly and particularly men aged 80 and over. The total inpatient cost of falls on snow and ice in the 2009/10 winter was 42 million GBP. **CONCLUSIONS:** Emergency hospital admissions for falls on snow and ice vary greatly across winters, and according to temperature, age and gender. The cost of these admissions in England in 2009/10 was considerable. With responsibility for health improvement moving to local councils, they will have to balance the cost of public health measures like gritting with the healthcare costs associated with falls. The economic burden of falls on snow and ice is substantial; keeping surfaces clear of snow and ice is a public health priority.

**Source:** <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3141627>

### Resource Description

**Communication:** 

## Climate Change and Human Health Literature Portal

resource focus on research or methods on how to communicate or frame issues on climate change;  
surveys of attitudes, knowledge, beliefs about climate change

A focus of content

### **Communication Audience:**

audience to whom the resource is directed

Policymaker

### **Exposure :**

weather or climate related pathway by which climate change affects health

Temperature

### **Geographic Feature:**

resource focuses on specific type of geography

Urban

### **Geographic Location:**

resource focuses on specific location

Non-United States

**Non-United States:** Europe

**European Region/Country:** European Country

**Other European Country :** England

### **Health Impact:**

specification of health effect or disease related to climate change exposure

Injury

### **Intervention:**

strategy to prepare for or reduce the impact of climate change on health

A focus of content

### **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

### **Model/Methodology:**

type of model used or methodology development is a focus of resource

Cost/Economic

**Population of Concern:** A focus of content

### **Population of Concern:**

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populations at particular risk or vulnerability to climate change impacts

Elderly

## Resource Type:

format or standard characteristic of resource

Research Article

## Timescale:

time period studied

Time Scale Unspecified

## Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content